

**PETITION FOR REVIVAL OF AN INTERNATIONAL APPLICATION FOR PATENT  
DESIGNATING THE U.S. ABANDONED UNINTENTIONALLY UNDER 37 CFR 1.137(b)**Docket Number  
(Optional)  
112624.00029

First Named Inventor: Keim et al.

International (PCT) Application No.: PCT/US03/32887

U.S. Application No.: 10/531,159  
(if known)

Filed: 14 October 2003

Title: Molecular Signature and Assay for Fluoroquinolone Resistance in Bacillus Anthracis

Attention: PCT Legal Staff  
Mail Stop PCT  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

The above-identified application became abandoned as to the United States because the fees and documents required by 35 U.S.C. 371(c) were not filed prior to the expiration of the time set in 37 CFR 1.495(b) or (c) as applicable. The date of abandonment is the day after the date on which the 35 U.S.C. 371(c) requirements were due. See 37 CFR 1.495(h).

**APPLICANT HEREBY PETITIONS FOR REVIVAL OF THIS APPLICATION**

NOTE: A grantable petition requires the following items:

- (1) Petition fee
- (2) Proper reply
- (3) Terminal disclaimer with disclaimer fee which is required for all international applications having an international filing date before June 8, 1995; and
- (4) Statement that the entire delay was unintentional.

## 1. Petition fee

☒ Small entity - fee \$ 770 (37 CFR 1.17(m)). Applicant claims small entity status.  
See 37 CFR 1.27.☐ Other than small entity - fee \$ \_\_\_\_\_ (37 CFR 1.17(m))

## 2. Proper reply

A. The proper reply (the missing 35 U.S.C. 371(c) requirement(s)) in the form of  
Submission under 35 U.S.C. 371 etc. \_\_\_\_\_ (identify type of reply):☒ has been filed previously on April 12, 2005 \_\_\_\_\_.☒ is enclosed herewith. A complete copy of the documents submitted on April 12, 2005 is enclosed.

[Page 1 of 2]

This collection of information is required by 37 CFR 1.137(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

## 3. Terminal disclaimer with disclaimer fee

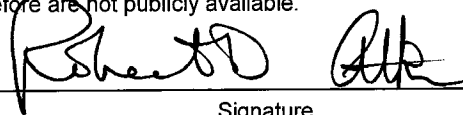
☒ Since this international application has an international filing date on or after June 8, 1995, no terminal disclaimer is required.

☐ A terminal disclaimer (and disclaimer fee (37 CFR 1.20(d)) of \$ \_\_\_\_\_ for a small entity or \$ \_\_\_\_\_ for other than a small entity) disclaiming the required period of time is enclosed herewith (see PTO/SB/63).

## 4. Statement. The entire delay in filing the required reply from the due date for the required reply until the filing of a grantable petition under 37 CFR 1.137(b) was unintentional.

**WARNING:**

Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.



Signature

January 8, 2008

Date

Robert D. Atkins

Typed or Printed Name

34,288

Registration Number, if applicable

QUARLES &amp; BRADY LLP

Address

602-229-5290

Telephone Number

Two North Central Avenue, Phoenix, AZ 85004

Address

Enclosures: ☒ Response☒ Fee Payment☐ Terminal Disclaimer☐ Other (please identify):

**JC10 Rec'd PCT/PTO 12 APR 2005**

**10/531159**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

The following documents have been received:

EV667329735US - Certificate of Mailing; Transmittal Letter to the United States Designated/Elected Office (DO/EO/US) Concerning a Submission under 35 U.S.C. 371 (2 pages); Preliminary Amendment (3 pages); Applicant Data Sheet (3 pages); Declaration (4 pages); Power of Attorney (4); Assignments (4), along with Recordation Form Cover Sheet; Verification Statement; Sequence Listing (28 pages); Diskette with copy of Sequence Listing; and return postcard.

|                     |  |
|---------------------|--|
| <b>Applicant :</b>  | Keim, Paul S.; Pearson, Talima; Price, Lance B.; B                                     |
| <b>Serial No. :</b> | Pending  |
| <b>Patent No. :</b> | N/A  |
| <b>Title:</b>       | Molecular Signatures and Assay for Fluoroquinolone Resistance in<br>Bacillus Anthracis |
| <b>Date:</b>        | 4/11/2005  |
| <b>Our File:</b>    | 112624.00029   |
| <b>Attorney:</b>    | RATKINS  |
| <b>Secretary:</b>   | MONEILL  |

QBSL IP Dept.

Received on 4/26/05

Docket for Copy to MKE (P)

**EXPRESS MAIL CERTIFICATE: EV667329735US**

I hereby certify that this correspondence listed below is being deposited with the United States Postal Service on the date set forth below as Express Mail in an envelope addressed to: Mail Stop PCT RO/US, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Date of Signature  
and Deposit: April 11, 2005

By: 

(Signature of person depositing mail)

MARITZA O'NEILL

**CERTIFICATE OF MAILING PURSUANT TO 37 C.F.R. 1.10**

Applicant : Paul S. Keim *et al.*  
Serial No. : To be assigned  
Date of Filing : April 11, 2005  
Title : *MOLECULAR SIGNATURE AND ASSAY FOR FLUOROQUINOLINE  
RESISTANCE IN BACILLUS ANTHRACIS*  
Art Unit : To be assigned  
Examiner : To be assigned  
Docket No. : 112624.00029

**Mail Stop: PCT RO/US**  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

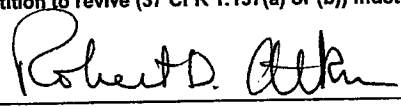
**Type of Filing:**

- 1) Transmittal Letter to the United States Designated/Elected Office (DO/EO/US) Concerning a Filing Under 35 U.S.C. 371 (2 pages) (in duplicate)
- 2) Preliminary Amendment (3 pages)
- 3) Application Data Sheet (3 pages)
- 4) Executed Declaration (4 pages)
- 5) Executed Power of Attorney (4)
- 6) Assignments (4), plus Recordation Form Cover Sheet
- 7) Verification Statement (1)
- 8) Paper copy of Sequence Listing (28 pages)
- 9) Diskette with copy of Sequence Listing
- 10) Return postcard

|  |   |   |
|--|---|---|
| <b>TRANSMITTAL LETTER TO THE UNITED STATES<br/>DESIGNATED/ELECTED OFFICE (DO/EO/US)<br/>CONCERNING A SUBMISSION UNDER 35 U.S.C. 371</b>  |   | ATTORNEY'S DOCKET NUMBER<br><b>112624.00029</b><br>U.S. APPLICATION NO. (If known, see 37 CFR 1.5)<br><b>To be assigned</b> |
| INTERNATIONAL APPLICATION NO.<br><b>PCT/US2003/032887</b>  | INTERNATIONAL FILING DATE<br><b>14 October 2003</b> | PRIORITY DATE CLAIMED<br><b>11 October 2002</b>   |
| TITLE OF INVENTION<br><b>MOLECULAR SIGNATURE AND ASSAY FOR FLUOROQUINOLINE RESISTANCE IN BACILLUS ANTHRACIS</b>  |   |   |
| APPLICANT(S) FOR DO/EO/US<br><b>Paul S. Keim, Talima Pearson, Lance Price, and Joseph D. Busch</b>   |   |   |
| Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:  |   |   |
| <ol style="list-style-type: none"> <li>1. <input checked="" type="checkbox"/> This is a <b>FIRST</b> submission of items concerning a submission under 35 U.S.C. 371.</li> <li>2. <input type="checkbox"/> This is a <b>SECOND</b> or <b>SUBSEQUENT</b> submission of items concerning a submission under 35 U.S.C. 371.</li> <li>3. <input checked="" type="checkbox"/> This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (21) indicated below.</li> <li>4. <input checked="" type="checkbox"/> The US has been elected (Article 31).</li> <li>5. <input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371(c)(2))           <ol style="list-style-type: none"> <li>a. <input type="checkbox"/> is attached hereto (required only if not communicated by the International Bureau).</li> <li>b. <input type="checkbox"/> has been communicated by the International Bureau.</li> <li>c. <input checked="" type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US).</li> </ol> </li> <li>6. <input type="checkbox"/> An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)).           <ol style="list-style-type: none"> <li>a. <input type="checkbox"/> is attached hereto.</li> <li>b. <input type="checkbox"/> has been previously submitted under 35 U.S.C. 154(d)(4).</li> </ol> </li> <li>7. <input checked="" type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))           <ol style="list-style-type: none"> <li>a. <input type="checkbox"/> are attached hereto (required only if not communicated by the International Bureau).</li> <li>b. <input type="checkbox"/> have been communicated by the International Bureau.</li> <li>c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired.</li> <li>d. <input checked="" type="checkbox"/> have not been made and will not be made.</li> </ol> </li> <li>8. <input type="checkbox"/> An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).</li> <li>9. <input checked="" type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).</li> <li>10. <input type="checkbox"/> An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).</li> </ol> |   |   |
| <b>Items 11 to 20 below concern document(s) or information included:</b>   |   |   |
| <ol style="list-style-type: none"> <li>11. <input type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98.</li> <li>12. <input checked="" type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.</li> <li>13. <input checked="" type="checkbox"/> A preliminary amendment.</li> <li>14. <input checked="" type="checkbox"/> An Application Data Sheet under 37 CFR 1.76.</li> <li>15. <input type="checkbox"/> A substitute specification.</li> <li>16. <input checked="" type="checkbox"/> A power of attorney and/or change of address letter.</li> <li>17. <input checked="" type="checkbox"/> A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 37 CFR 1.821- 1.825.</li> <li>18. <input type="checkbox"/> A second copy of the published International Application under 35 U.S.C. 154(d)(4).</li> <li>19. <input type="checkbox"/> A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).</li> <li>20. <input checked="" type="checkbox"/> Other items or information: <b>Verification Statement and Return postcard.</b></li> </ol>   |   |   |

This collection of information is required by 37 CFR 1.414 and 1.491-1.492. The information is required to obtain or retain a benefit by the public, which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 15 minutes to complete, including gathering information, preparing, and submitting the completed form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

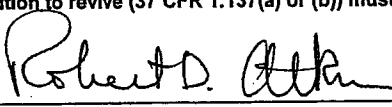
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

|  |  |   |         |  |           |
|--|--|---|---------|--|-----------|
| U.S. APPLICATION NO. (if known, see 37 CFR 1.5)  |  | INTERNATIONAL APPLICATION NO.   |         | ATTORNEY'S DOCKET NUMBER   |           |
| To be assigned   |  | PCT/US2003/032887   |         | 112624.00029   |           |
| The following fees have been submitted   |  |   |         | <b>CALCULATIONS</b>  |           |
|  |  |   |         | <b>PTO USE ONLY</b>  |           |
| 21.  | <input checked="" type="checkbox"/> Basic national fee.....  | \$300   |         | \$ 300.00  |           |
| 22.  | <input checked="" type="checkbox"/> Examination fee<br>If International preliminary examination report prepared by USPTO and all claims satisfy provisions of PCT Article 33(1)-(4).....   | \$100   |         | \$ 200.00  |           |
|  | All other situations.....  | \$200   |         |  |           |
| 23.  | <input checked="" type="checkbox"/> Search fee<br>Search fee (37 CFR 1.445(a)(2)) has been paid on the international application to the USPTO as an International Searching Authority..... | \$100   |         | \$ 100.00  |           |
|  | International Search Report prepared and provided to the Office.....   | \$400   |         |  |           |
|  | All other situations.....  | \$500   |         |  |           |
| <b>TOTAL OF 21, 22 and 23 =</b>  |  |   |         | \$ 600.00  |           |
| <input type="checkbox"/> Additional fee for specification and drawings filed in paper over 100 sheets (excluding sequence listing or computer program listing filed in an electronic medium).<br>The fee is \$250 for each additional 50 sheets of paper or fraction thereof.  |  |   |         |  |           |
| Total Sheets   | Extra Sheets   | Number of each additional 50 or fraction thereof (round up to a whole number) | RATE    |  |           |
| - 100 =  | /50 =  |   | x \$250 | \$ 0.00  |           |
| Surcharge of \$130.00 for furnishing the oath or declaration later than 30 months from the earliest claimed priority date (37 CFR 1.492(e)).   |  |   |         | \$ 0.00  |           |
| CLAIMS   | NUMBER FILED   | NUMBER EXTRA  | RATE    | \$   |           |
| Total claims   | 22 - 20 =  | 2   | x \$ 50 | \$ 100.00  |           |
| Independent claims   | 3 - 3 =  | 0   | x \$200 | \$ 0.00  |           |
| MULTIPLE DEPENDENT CLAIM(S) (if applicable)  |  |   |         | + \$360  | \$ 0.00   |
| <b>TOTAL OF ABOVE CALCULATIONS =</b>   |  |   |         | \$ 700.00  |           |
| <input checked="" type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. Fees above are reduced by 1/2.  |  |   |         | 350.00   |           |
| <b>SUBTOTAL =</b>  |  |   |         | \$ 350.00  |           |
| Processing fee of \$130.00 for furnishing the English translation later than 30 months from the earliest claimed priority date (37 CFR 1.492(f)).  |  |   |         | \$ 0.00  |           |
| <b>TOTAL NATIONAL FEE =</b>  |  |   |         | \$ 350   |           |
| Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property   |  |   |         | \$ 40.00   |           |
| <b>TOTAL FEES ENCLOSED =</b>   |  |   |         | \$ 390.00  |           |
|  |  |   |         | Amount to be refunded:   | \$        |
|  |  |   |         | Amount to be charged:  | \$ 390.00 |
| <p>a. <input type="checkbox"/> A check in the amount of \$ _____ to cover the above fees is enclosed.</p> <p>b. <input checked="" type="checkbox"/> Please charge my Deposit Account No. <u>17-0055</u> in the amount of \$ <u>390.00</u> to cover the above fees.<br/>A duplicate copy of this sheet is enclosed.</p> <p>c. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. <u>17-0055</u>. A duplicate copy of this sheet is enclosed.</p> <p>d. <input type="checkbox"/> Fees are to be charged to a credit card. <b>WARNING:</b> Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.</p> |  |   |         |  |           |
| <p><b>NOTE:</b> Where an appropriate time limit under 37 CFR 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the International Application to pending status.</p>   |  |   |         |  |           |
| <p>SEND ALL CORRESPONDENCE TO:</p> <p>Robert D. Atkins<br/>QUARLES &amp; BRADY STREICH LANG LLP<br/>One Renaissance Square<br/>Two North Central Avenue<br/>Phoenix, AZ 85004</p>  |  |   |         |  |           |
|  |  |   |         | <p><br/>SIGNATURE</p> <p>Robert D. Atkins<br/>NAME</p> <p>34,288<br/>REGISTRATION NUMBER</p> |           |

|  |  |   |
|--|--|---|
| <b>TRANSMITTAL LETTER TO THE UNITED STATES<br/>DESIGNATED/ELECTED OFFICE (DO/EO/US)<br/>CONCERNING A SUBMISSION UNDER 35 U.S.C. 371</b>  |  | ATTORNEY'S DOCKET NUMBER<br>112624.00029                          |
| INTERNATIONAL APPLICATION NO.<br>PCT/US2003/032887   | INTERNATIONAL FILING DATE<br>14 October 2003 | U.S. APPLICATION NO. (If known, see 37 CFR 1.5)<br>To be assigned |
| TITLE OF INVENTION<br>MOLECULAR SIGNATURE AND ASSAY FOR FLUOROQUINOLINE RESISTANCE IN BACILLUS ANTHRACIS   |  | PRIORITY DATE CLAIMED<br>11 October 2002                          |
| APPLICANT(S) FOR DO/EO/US<br>Paul S. Keim, Talima Pearson, Lance Price, and Joseph D. Busch  |  |   |
| Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:  |  |   |
| 1. <input checked="" type="checkbox"/> This is a <b>FIRST</b> submission of items concerning a submission under 35 U.S.C. 371.   |  |   |
| 2. <input type="checkbox"/> This is a <b>SECOND</b> or <b>SUBSEQUENT</b> submission of items concerning a submission under 35 U.S.C. 371.  |  |   |
| 3. <input checked="" type="checkbox"/> This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (21) indicated below. |  |   |
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| a. <input type="checkbox"/> is attached hereto (required only if not communicated by the International Bureau).  |  |   |
| b. <input type="checkbox"/> has been communicated by the International Bureau.   |  |   |
| c. <input checked="" type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US).  |  |   |
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| a. <input type="checkbox"/> are attached hereto (required only if not communicated by the International Bureau).   |  |   |
| b. <input type="checkbox"/> have been communicated by the International Bureau.  |  |   |
| c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired.  |  |   |
| d. <input checked="" type="checkbox"/> have not been made and will not be made.  |  |   |
| 8. <input type="checkbox"/> An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).  |  |   |
| 9. <input checked="" type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).  |  |   |
| 10. <input type="checkbox"/> An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).                              |  |   |
| <b>Items 11 to 20 below concern document(s) or information included:</b>   |  |   |
| 11. <input type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98.   |  |   |
| 12. <input checked="" type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.  |  |   |
| 13. <input checked="" type="checkbox"/> A preliminary amendment.   |  |   |
| 14. <input checked="" type="checkbox"/> An Application Data Sheet under 37 CFR 1.76.   |  |   |
| 15. <input type="checkbox"/> A substitute specification.   |  |   |
| 16. <input checked="" type="checkbox"/> A power of attorney and/or change of address letter.   |  |   |
| 17. <input checked="" type="checkbox"/> A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 37 CFR 1.821- 1.825.  |  |   |
| 18. <input type="checkbox"/> A second copy of the published International Application under 35 U.S.C. 154(d)(4).   |  |   |
| 19. <input type="checkbox"/> A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).   |  |   |
| 20. <input checked="" type="checkbox"/> Other items or information: <span style="float: right;">Verification Statement and Return postcard.</span>   |  |   |

This collection of information is required by 37 CFR 1.414 and 1.491-1.492. The information is required to obtain or retain a benefit by the public, which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 15 minutes to complete, including gathering information, preparing, and submitting the completed form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

|   |              |   |         |   |              |
|---|--------------|---|---------|---|--------------|
| U.S. APPLICATION NO. (if known, see 37 CFR 1.5)   |              | INTERNATIONAL APPLICATION NO.   |         | ATTORNEY'S DOCKET NUMBER  |              |
| To be assigned  |              | PCT/US2003/032887   |         | 112624.00029  |              |
| The following fees have been submitted  |              |   |         | CALCULATIONS  | PTO USE ONLY |
| 21. <input checked="" type="checkbox"/> Basic national fee..... \$300   |              |   |         | \$ 300.00   |              |
| 22. <input checked="" type="checkbox"/> Examination fee<br>If International preliminary examination report prepared by USPTO and all claims satisfy provisions of PCT Article 33(1)-(4)..... \$100<br>All other situations..... \$200   |              |   |         | \$ 200.00   |              |
| 23. <input checked="" type="checkbox"/> Search fee<br>Search fee (37 CFR 1.445(a)(2)) has been paid on the international application to the USPTO as an International Searching Authority..... \$100<br>International Search Report prepared and provided to the Office..... \$400<br>All other situations..... \$500   |              |   |         | \$ 100.00   |              |
| <b>TOTAL OF 21, 22 and 23 =</b>   |              |   |         | \$ 600.00   |              |
| <input type="checkbox"/> Additional fee for specification and drawings filed in paper over 100 sheets (excluding sequence listing or computer program listing filed in an electronic medium).<br>The fee is \$250 for each additional 50 sheets of paper or fraction thereof.   |              |   |         |   |              |
| Total Sheets  | Extra Sheets | Number of each additional 50 or fraction thereof (round up to a whole number) | RATE    |   |              |
| - 100 =   | /50 =        |   | x \$250 | \$ 0.00   |              |
| Surcharge of \$130.00 for furnishing the oath or declaration later than 30 months from the earliest claimed priority date (37 CFR 1.492(e)).  |              |   |         | \$ 0.00   |              |
| CLAIMS  | NUMBER FILED | NUMBER EXTRA  | RATE    |   |              |
| Total claims  | 22 - 20 =    | 2   | x \$ 50 | \$ 100.00   |              |
| Independent claims  | 3 - 3 =      | 0   | x \$200 | \$ 0.00   |              |
| MULTIPLE DEPENDENT CLAIM(S) (if applicable)   |              |   | + \$360 | \$ 0.00   |              |
| <b>TOTAL OF ABOVE CALCULATIONS =</b>  |              |   |         | \$ 700.00   |              |
| <input checked="" type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. Fees above are reduced by 1/2.   |              |   |         | 350.00  |              |
| <b>SUBTOTAL =</b>   |              |   |         | \$ 350.00   |              |
| Processing fee of \$130.00 for furnishing the English translation later than 30 months from the earliest claimed priority date (37 CFR 1.492(f)).   |              |   |         | \$ 0.00   |              |
| <b>TOTAL NATIONAL FEE =</b>   |              |   |         | \$ 350  |              |
| Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property  |              |   |         | \$ 40.00  |              |
| <b>TOTAL FEES ENCLOSED =</b>  |              |   |         | \$ 390.00   |              |
|   |              |   |         | Amount to be refunded:  | \$           |
|   |              |   |         | Amount to be charged:   | \$ 390.00    |
| a. <input type="checkbox"/> A check in the amount of \$ _____ to cover the above fees is enclosed.<br>b. <input checked="" type="checkbox"/> Please charge my Deposit Account No. <u>17-0055</u> in the amount of \$ <u>390.00</u> to cover the above fees.<br>A duplicate copy of this sheet is enclosed.<br>c. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. <u>17-0055</u> . A duplicate copy of this sheet is enclosed.<br>d. <input type="checkbox"/> Fees are to be charged to a credit card. <b>WARNING:</b> Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038. |              |   |         |   |              |
| NOTE: Where an appropriate time limit under 37 CFR 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the International Application to pending status.  |              |   |         |   |              |
| SEND ALL CORRESPONDENCE TO:<br>Robert D. Atkins<br>QUARLES & BRADY STREICH LANG LLP<br>One Renaissance Square<br>Two North Central Avenue<br>Phoenix, AZ 85004  |              |   |         |   |              |
|   |              |   |         | <br>SIGNATURE |              |
|   |              |   |         | Robert D. Atkins  |              |
|   |              |   |         | NAME  |              |
|   |              |   |         | 34,288  |              |
|   |              |   |         | REGISTRATION NUMBER   |              |



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant : Paul S. Keim et al.  
Serial No. : To be assigned  
Date of Filing : April 11, 2005  
Title : *MOLECULAR SIGNATURE AND ASSAY FOR FLUOROQUINOLINE  
RESISTANCE IN BACILLUS ANTHRACIS*  
Art Unit : To be assigned  
Examiner : To be assigned

---

**PRELIMINARY AMENDMENT**

---

**MAIL STOP: PCT RO/US**  
Commissioner for Patents  
U.S. Patent and Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

Prior to examination, please amend the above-identified application as set forth below:

Amendments to the Specification: Begin at page 2.

Amendments to the Claims: None.

Remarks: begin on page: begin on page 3.

IN THE SPECIFICATION:

Amend paragraph [00001] as follows:

CLAIM TO DOMESTIC PRIORITY

[00001] This application is a U.S. National Stage Application filed under 35 U.S.C. 371 claiming priority from the International Application No. PCT/US2003/032887, filed October 14, 2003, which claims the benefit of United States Provisional Patent Application Serial No. 60/417,843, filed October 11, 2002, and which applications are incorporated herein by reference. ~~This application claims priority to U.S. Provisional application Serial No. 60/417,843 entitled "Molecular Signature and Assay for Fluoroquinolone Resistance in *Bacillus Anthracis*" filed October 11, 2002, by Paul S. Keim *et al.*, and is herein incorporated by reference in its entirety.~~

**REMARKS**

Applicants have amended the subject application and request consideration.

The Commissioner is authorized to charge any fees due in connection with this filing and during the pendency of this application, to Deposit Account No. 17-0055.

Respectfully submitted,  
**QUARLES & BRADY STREICH LANG, LLP**

April 11, 2005

By: Robert D. Atkins  
Robert D. Atkins  
Reg. No. 34,288

Attorney Docket No. 112624.00029

**Address all correspondence to:**

Robert D. Atkins  
Quarles & Brady Streich Lang LLP  
One Renaissance Square  
Two North Central Avenue  
Phoenix, AZ 85004  
Telephone: 602-229-5311  
Facsimile: 602-229-5690  
Email: rda@quarles.com

## **Application Data Sheet**

### **Application Information**

|  |  |
|--|--|
| <b>Application number:</b>             | Pending  |
| <b>Filing Date:</b>                    | April 11, 2005   |
| <b>Application Type:</b>               | Utility  |
| <b>Number of copies of CRF:</b>        | N/A  |
| <b>Title:</b>                          | Molecular Signature and Assay for<br>Fluoroquinolone Resistance in<br>Bacillus Anthracis |
| <b>Attorney Docket Number:</b>         | 112624.00029   |
| <b>Request for Early Publication?:</b> | No   |
| <b>Request for Non-Publication?:</b>   | No   |
| <b>Suggested Drawing Figure:</b>       |  |
| <b>Total Drawing Sheets:</b>           | 2  |
| <b>Small Entity?:</b>                  | Yes  |
| <b>Licensed US Govt. Agency:</b>       | None   |
| <b>Contract or Grant Numbers:</b>      | None   |

### **Applicant Information**

|   |                   |
|---|-------------------|
| <b>Primary Citizenship Country:</b>           | United States     |
| <b>Given Name:</b>                            | Paul              |
| <b>Middle Name:</b>                           | S.                |
| <b>Family Name:</b>                           | Keim              |
| <b>Name Suffix:</b>                           |                   |
| <b>City of Residence:</b>                     | Flagstaff         |
| <b>State or Province of Residence:</b>        | Arizona           |
| <b>Country of Residence:</b>                  | United States     |
| <b>Street of mailing address:</b>             | 3115 W. Tina Lane |
| <b>City of mailing address:</b>               | Flagstaff         |
| <b>State or Province of mailing address:</b>  | Arizona           |
| <b>Country of mailing address:</b>            | United States     |
| <b>Postal or Zip Code of mailing address:</b> | 86001             |

### **Applicant Information**

**Primary Citizenship Country:** United States  
**Given Name:** Talima  
**Middle Name:**  
**Family Name:** Pearson  
**Name Suffix:**  
**City of Residence:** Flagstaff  
**State or Province of Residence:** Arizona  
**Country of Residence:** United States  
**Street of mailing address:** 1065 Tolani Place  
**City of mailing address:** Flagstaff  
**State or Province of mailing address:** Arizona  
**Country of mailing address:** United States  
**Postal or Zip Code of mailing address:** 86001

### **Applicant Information**

**Primary Citizenship Country:** United States  
**Given Name:** Lance  
**Middle Name:** B.  
**Family Name:** Price  
**Name Suffix:**  
**City of Residence:** Baltimore  
**State or Province of Residence:** Maryland  
**Country of Residence:** United States  
**Street of mailing address:** 3720 Rexmere Road  
**City of mailing address:** Baltimore  
**State or Province of mailing address:** Maryland  
**Country of mailing address:** United States  
**Postal or Zip Code of mailing address:** 21218

### **Applicant Information**

**Primary Citizenship Country:** United States  
**Given Name:** Joseph  
**Middle Name:** D.  
**Family Name:** Busch  
**Name Suffix:**  
**City of Residence:** West Lafayette  
**State or Province of Residence:** Indiana  
**Country of Residence:** United States  
**Street of mailing address:** P.O. Box 2641  
**City of mailing address:** West Lafayette  
**State or Province of mailing address:** Indiana  
**Country of mailing address:** United States  
**Postal or Zip Code of mailing address:** 47996

### **Correspondence Information**

**Correspondence Customer Number:** 26707  
**Name:** Quarles & Brady LLP  
**Street of mailing address:** One Renaissance Square  
Two North Central Avenue  
**City of mailing address:** Phoenix  
**State or Province of mailing address:** Arizona  
**Country of mailing address:** United States  
**Postal or Zip Code of mailing address:** 85004  
**Phone number:** (602) 229-5311  
**Fax Number:** (602) 229-5690  
**E-Mail address:** rda@quarles.com

**DECLARATION FOR UTILITY OR  
DESIGN  
PATENT APPLICATION  
(37 CFR 1.63)**

☒ Declaration Submitted With Initial Filing      OR      ☐ Declaration Submitted after Initial Filing (surcharge (37 CFR 1.16 (e)) required)

|                        |                |
|------------------------|----------------|
| Attorney Docket Number | 112624.00029   |
| First Named Inventor   | Paul S. Keim   |
| COMPLETE IF KNOWN      |                |
| Application Number     | To be assigned |
| Filing Date            |                |
| Art Unit               | To be assigned |
| Examiner Name          | To be assigned |

I hereby declare that:

Each inventor's residence, mailing address, and citizenship are as stated below next to their name.

I believe the inventor(s) named below to be the original and first inventor(s) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

**MOLECULAR SIGNATURE AND ASSAY FOR FLUOROQUINOLINE RESISTANCE IN  
BACILLUS ANTHRACIS**

(Title of the Invention)

the specification of which

☐ is attached hereto

OR

☒ was filed on (MM/DD/YYYY) **10/14/2003** as United States Application Number or PCT International

Application Number **PCT/US03/32287** and was amended on (MM/DD/YYYY) (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment specifically referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or (f), or 365(b) of any foreign application(s) for patent, inventor's or plant breeder's rights certificate(s), or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent, inventor's or plant breeder's rights certificate(s), or any PCT international application having a filing date before that of the application on which priority is claimed.

| Prior Foreign Application Number(s) | Country | Foreign Filing Date (MM/DD/YYYY) | Priority Not Claimed     | Certified Copy Attached? |                                     |
|-------------------------------------|---------|----------------------------------|--------------------------|--------------------------|-------------------------------------|
|                                     |         |                                  |                          | YES                      | NO                                  |
| PCT/US2003/32287                    | PCT     | 10/14/2003                       | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|                                     |         |                                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
|                                     |         |                                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |
|                                     |         |                                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            |

☐ Additional foreign application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto.

[Page 1 of 2]

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 21 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance completing the form, call 1-800-PTO-9199 and select option 2.

1518043

**DECLARATION — Utility or Design Patent Application**

|   |  |  |       |   |   |
|---|--|--|-------|---|---|
| Direct all correspondence to:   |  | <input checked="" type="checkbox"/> The address associated with Customer Number: | 26707 | OR  | <input type="checkbox"/> Correspondence address below |
| Name  |  |  |       |   |   |
| Address   |  |  |       |   |   |
| City  |  | State  |       | ZIP   |   |
| Country   |  | Telephone  |       | Fax   |   |
| I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon. |  |  |       |   |   |
| NAME OF SOLE OR FIRST INVENTOR:   |  |  |       | <input type="checkbox"/> A petition has been filed for this unsigned inventor |   |
| Given Name (first and middle (if any))  |  |  |       | Family Name or Surname  |   |
| Paul S.   |  |  |       | KEIM  |   |
| Inventor's Signature <i>Paul Keim</i>   |  |  |       | Date 4/5/05   |   |
| Residence: City   |  | State  |       | Country   |   |
| Flagstaff   |  | Arizona  |       | United States   |   |
| Citizenship   |  | United States  |       |   |   |
| Mailing Address   |  |  |       |   |   |
| 3115 W. Tina Lane   |  |  |       |   |   |
| City  |  | State  |       | Country   |   |
| Flagstaff   |  | Arizona  |       | United States   |   |
| Zip   |  | 86001  |       |   |   |
| NAME OF SECOND INVENTOR:  |  |  |       |   |   |
| Given Name (first and middle (if any))  |  |  |       | Family Name or Surname  |   |
| Talima  |  |  |       | PEARSON   |   |
| Inventor's Signature <i>Talima Pearson</i>  |  |  |       | Date 4/8/05   |   |
| Residence: City   |  | State  |       | Country   |   |
| Flagstaff   |  | Arizona  |       | United States   |   |
| Citizenship   |  | United States  |       |   |   |
| Mailing Address   |  |  |       |   |   |
| 1065 Tolani Avenue Place  |  |  |       |   |   |
| City  |  | State  |       | Country   |   |
| Flagstaff   |  | Arizona  |       | United States   |   |
| Zip   |  | 86001  |       |   |   |
| <input checked="" type="checkbox"/> Additional inventors or a legal representative are being named on the 1 supplemental sheet(s) PTO/SB/02A or 02LR attached hereto.   |  |  |       |   |   |



Please type a plus sign (+) inside this box → ☐

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|                    |  |
|--------------------|--|
| <b>DECLARATION</b> | <b>ADDITIONAL INVENTOR(S)</b><br>Supplemental Sheet<br>Page <u>3</u> of <u>3</u> |
|--------------------|--|

|  |          |   |                       |
|--|----------|---|-----------------------|
| Name of Additional Joint Inventor, if any: |          | <input type="checkbox"/> A petition has been filed for this unsigned inventor |                       |
| Given Name (first and middle (if any))     |          | Family Name or Surname  |                       |
| Lance                                      |          | PRICE   |                       |
| Inventor's Signature <i>Lance Price</i>    |          | Date <u>4/7/05</u>  |                       |
| Residence: City Baltimore                  | State MD | Country U.S.  | Citizenship U.S.      |
| Mailing Address                            |          |   |                       |
| Mailing Address 3720 Rexmere Road          |          |   |                       |
| City Baltimore                             | State MD | ZIP 21218   | Country United States |
| Name of Additional Joint Inventor, if any: |          | <input type="checkbox"/> A petition has been filed for this unsigned inventor |                       |
| Given Name (first and middle (if any))     |          | Family Name or Surname  |                       |
| Joseph D.                                  |          | BUSH  |                       |
| Inventor's Signature                       |          | Date  |                       |
| Residence: City West Lafayette             | State IN | Country U.S.  | Citizenship U.S.      |
| Mailing Address                            |          |   |                       |
| Mailing Address P.O. Box 2841              |          |   |                       |
| City West Lafayette                        | State IN | ZIP 47996   | Country United States |
| Name of Additional Joint Inventor, if any: |          | <input type="checkbox"/> A petition has been filed for this unsigned inventor |                       |
| Given Name (first and middle (if any))     |          | Family Name or Surname  |                       |
|  |          |   |                       |
| Inventor's Signature                       |          | Date  |                       |
| Residence: City                            | State    | Country   | Citizenship           |
| Mailing Address                            |          |   |                       |
| Mailing Address                            |          |   |                       |
| City                                       | State    | ZIP   | Country               |

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| <b>DECLARATION</b>                         |          | <b>ADDITIONAL INVENTOR(S)<br/>Supplemental Sheet<br/>Page 3 of 3</b>          |                       |
|--|----------|---|-----------------------|
| Name of Additional Joint Inventor, if any: |          | <input type="checkbox"/> A petition has been filed for this unsigned inventor |                       |
| Given Name (first and middle (if any))     |          | Family Name or Surname  |                       |
| Lance                                      |          | PRICE   |                       |
| Inventor's Signature                       |          | Date  |                       |
| Residence: City Baltimore                  | State MD | Country U.S.  | Citizenship U.S.      |
| Mailing Address                            |          |   |                       |
| Mailing Address 3720 Rexmere Road          |          |   |                       |
| City Baltimore                             | State MD | Zip 21218   | Country United States |
| Name of Additional Joint Inventor, if any: |          | <input type="checkbox"/> A petition has been filed for this unsigned inventor |                       |
| Given Name (first and middle (if any))     |          | Family Name or Surname  |                       |
| Joseph D.                                  |          | BUSH  |                       |
| Inventor's Signature <i>Joseph D. Bush</i> |          | Date 4.9.2005   |                       |
| Residence: City West Lafayette             | State IN | Country U.S.  | Citizenship U.S.      |
| Mailing Address                            |          |   |                       |
| Mailing Address P.O. Box 2641              |          |   |                       |
| City West Lafayette                        | State IN | Zip 47996   | Country United States |
| Name of Additional Joint Inventor, if any: |          | <input type="checkbox"/> A petition has been filed for this unsigned inventor |                       |
| Given Name (first and middle (if any))     |          | Family Name or Surname  |                       |
|  |          |   |                       |
| Inventor's Signature                       |          | Date  |                       |
| Residence: City                            | State    | Country   | Citizenship           |
| Mailing Address                            |          |   |                       |
| Mailing Address                            |          |   |                       |
| City                                       | State    | Zip   | Country               |

Express Mail Label No. EV667329735US

(09-04)

Approved for use through 11/30/2006. OMB 0651-0035  
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**POWER OF ATTORNEY  
and  
CORRESPONDENCE ADDRESS  
INDICATION FORM**

|                        |                                  |
|------------------------|----------------------------------|
| Application Number     | Pending                          |
| Filing Date            |                                  |
| First Named Inventor   | Paul S. Keim                     |
| Title                  | Molecular Signature and Assay .. |
| Art Unit               | To be assigned                   |
| Examiner Name          | To be assigned                   |
| Attorney Docket Number | 112624.00029                     |

I hereby appoint:

☒ Practitioners associated with the Customer  
Number:

26707

OR

☐ Practitioner(s) named below:

| Name | Registration Number |
|------|---------------------|
|      |                     |
|      |                     |
|      |                     |
|      |                     |

as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith.

Please recognize or change the correspondence address for the above-identified application to:

☐ The address associated with the above-mentioned Customer Number:

OR

☐ The address associated with Customer Number:☐ Firm or  
Individual Name

Address

City

State

Zip

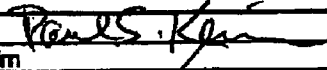
Country

Telephone

Fax

I am the:

☒ Applicant/Inventor.☐ Assignee of record of the entire interest. See 37 CFR 3.71.  
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/06)**SIGNATURE of Applicant or Assignee of Record**

|                   |   |           |              |
|-------------------|---|-----------|--------------|
| Signature         |  | Date      | 4-11-05      |
| Name              | Paul S. Keim  | Telephone | 928 523 1078 |
| Title and Company |   |           |              |

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.

☒ \*Total of 4 forms are submitted.

This collection of information is required by 37 CFR 1.31 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1460, Alexandria, VA 22313-1460. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Doc. No. 1919047

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**POWER OF ATTORNEY  
and  
CORRESPONDENCE ADDRESS  
INDICATION FORM**

|                        |                                  |
|------------------------|----------------------------------|
| Application Number     | Pending                          |
| Filing Date            |                                  |
| First Named Inventor   | Paul S. Keim                     |
| Title                  | Molecular Signature and Assay .. |
| Art Unit               | To be assigned                   |
| Examiner Name          | To be assigned                   |
| Attorney Docket Number | 112624.00029                     |

I hereby appoint:

Practitioners associated with the Customer  
Number:

26707

OR



Practitioner(s) named below:

| Name | Registration Number |
|------|---------------------|
|      |                     |
|      |                     |
|      |                     |
|      |                     |

as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith.

Please recognize or change the correspondence address for the above-identified application to:



The address associated with the above-mentioned Customer Number:

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The address associated with Customer Number:

Firm or  
Individual Name

Address

City

State

Zip

Country

Telephone

Fax

I am the:



Applicant/Inventor.

Assignee of record of the entire interest. See 37 CFR 3.71.  
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)**SIGNATURE of Applicant or Assignee of Record**

|                   |                             |           |              |
|-------------------|-----------------------------|-----------|--------------|
| Signature         | <i>Talima Pearson</i>       | Date      | 4/8/05       |
| Name              | Talima Pearson              | Telephone | 928-529-4290 |
| Title and Company | Northern Arizona University |           |              |

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.



Total of 4 forms are submitted.

This collection of information is required by 37 CFR 1.31 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Doc. No. 1919921

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and  
CORRESPONDENCE ADDRESS  
INDICATION FORM**

|                        |                                  |
|------------------------|----------------------------------|
| Application Number     | Pending                          |
| Filing Date            |                                  |
| First Named Inventor   | Paul S. Keim                     |
| Title                  | Molecular Signature and Assay .. |
| Art Unit               | To be assigned                   |
| Examiner Name          | To be assigned                   |
| Attorney Docket Number | 112624.00029                     |

I hereby appoint:

☒ Practitioners associated with the Customer  
Number:

26707

OR

☐ Practitioner(s) named below:

| Name | Registration Number |
|------|---------------------|
|      |                     |
|      |                     |
|      |                     |
|      |                     |

as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith.

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OR

☐ The address associated with Customer Number:

|   |       |     |  |
|---|-------|-----|--|
| <input type="checkbox"/> Firm or<br>Individual Name |       |     |  |
| Address   |       |     |  |
| City  | State | Zip |  |
| Country   |       |     |  |
| Telephone   | Fax   |     |  |

I am the:

☒ Applicant/Inventor.☐ Assignee of record of the entire interest. See 37 CFR 3.71.  
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)**SIGNATURE of Applicant or Assignee of Record**

|                   |                    |           |        |
|-------------------|--------------------|-----------|--------|
| Signature         | <i>Lance Price</i> | Date      | 4/7/05 |
| Name              | Lance Price        | Telephone |        |
| Title and Company |                    |           |        |

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.

☒ Total of 4 forms are submitted.

This collection of information is required by 37 CFR 1.31 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Doc. No. 1919918

**POWER OF ATTORNEY  
and  
CORRESPONDENCE ADDRESS  
INDICATION FORM**

|                        |                                  |
|------------------------|----------------------------------|
| Application Number     | Pending                          |
| Filing Date            |                                  |
| First Named Inventor   | Paul S. Keim                     |
| Title                  | Molecular Signature and Assay .. |
| Art Unit               | To be assigned                   |
| Examiner Name          | To be assigned                   |
| Attorney Docket Number | 112624.00029                     |

I hereby appoint:

☒ Practitioners associated with the Customer Number:

26707

OR

☐ Practitioner(s) named below:

| Name | Registration Number |
|------|---------------------|
|      |                     |
|      |                     |
|      |                     |
|      |                     |

as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith.

Please recognize or change the correspondence address for the above-identified application to:

☐ The address associated with the above-mentioned Customer Number:

OR

☐ The address associated with Customer Number:☐ Firm or  
Individual Name  
Address

City

State

Zip

Country

Telephone

Fax

I am the:

☒ Applicant/Inventor.☐ Assignee of record of the entire interest. See 37 CFR 3.71.  
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/56)

SIGNATURE of Applicant or Assignee of Record

|                   |                        |           |              |
|-------------------|------------------------|-----------|--------------|
| Signature         | <i>Joseph D. Busch</i> | Date      | 04.09.2005   |
| Name              | Joseph D. Busch        | Telephone | 765-532-2173 |
| Title and Company |                        |           |              |

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.

☒ Total of 4 forms are submitted.

This collection of information is required by 37 CFR 1.31 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-8198 and select option 2.

Doc. No. 1919923

**RECORDATION FORM COVER SHEET  
PATENTS ONLY**

To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.

**1. Name of conveying party(ies)/Execution Date(s):**Paul S. Keim  
Talima Pearson  
Lance Price  
Joseph D. BuschExecution Date(s) 10/28/03; 10/24/03; 12/14/03; 10/11/04Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No**3. Nature of conveyance:**

- ☒ Assignment ☐ Merger  
☐ Security Agreement ☐ Change of Name  
☐ Government Interest Assignment  
☐ Executive Order 9424, Confirmatory License  
☐ Other \_\_\_\_\_

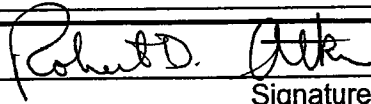
**2. Name and address of receiving party(ies)**Name: ARIZONA BOARD OF REGENTS,Internal Address: acting for and on behalf of,Northern Arizona UniversityStreet Address: c/o Arizona TechnologyEnterprises, LLC - 699 S. Mill AvenueCity: Brickyard Suite 601, 691AAState: Tempe, ArizonaCountry: United States Zip: 85281Additional name(s) & address(es) attached? ☐ Yes ☒ No**4. Application or patent number(s):**☒ This document is being filed together with a new application.

A. Patent Application No.(s)

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No**5. Name and address to whom correspondence concerning document should be mailed:**Name: Robert D. AtkinsInternal Address: QUARLES & BRADY STREICH  
LANG LLPStreet Address: One Renaissance Square  
Two North Central AvenueCity: PhoenixState: Arizona Zip: 85004Phone Number: (602) 229-5311Fax Number: (602) 229-5690Email Address: rda@quarles.com**6. Total number of applications and patents involved:**1**7. Total fee (37 CFR 1.21(h) & 3.41) \$ 40**

- ☐ Authorized to be charged by credit card  
☒ Authorized to be charged to deposit account  
☐ Enclosed  
☐ None required (government interest not affecting title)

**8. Payment Information**a. Credit Card Last 4 Numbers \_\_\_\_\_  
Expiration Date \_\_\_\_\_b. Deposit Account Number 17-0055Authorized User Name Robert D. Atkins**9. Signature:**  
SignatureApril 11, 2005  
DateRobert D. Atkins

Name of Person Signing

Total number of pages including cover  
sheet, attachments, and documents:5Documents to be recorded (including cover sheet) should be faxed to (703) 306-5995, or mailed to:  
Mail Stop Assignment Recordation Services, Director of the USPTO, P.O. Box 1450, Alexandria, V.A. 22313-1450

# ASSIGNMENT AND AGREEMENT

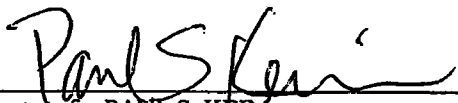
For good and valuable consideration, the receipt of which is hereby acknowledged, I, PAUL S. KEIM of Flagstaff, Arizona, have sold, assigned, and transferred, and do hereby sell, assign, and transfer unto ARIZONA BOARD OF REGENTS, acting for and on behalf of, NORTHERN ARIZONA UNIVERSITY (ABR/NAU), a non-profit organization of the State of Arizona, having its principal office in Tempe, State of Arizona, United States of America, and its successors, assigns, and legal representatives, the entire right, title, and interest in and to certain invention(s), entitled MOLECULAR SIGNATURES AND ASSAY FOR FLUOROQUINOLINE RESISTANCE IN BACILLUS ANTHRACIS, Attorney Docket No. 130588.00026, described, illustrated, and claimed in an application filed under the Patent Cooperation Treaty (PCT), together with the entire right, title and interest in and to any application for Letters Patent filed in the United States of America claiming priority to, claiming the invention described in, or otherwise based on, the PCT application, and in and to any continuation, continuation-in-part, division, reissue, reexamination, extension, renewal, or substitute thereof, and in and to any Letters Patent which may issue upon the application(s).

I hereby sell, assign, and transfer unto ABR/NAU, the entire right, title, and interest in and to application(s) for patent filed in all countries foreign to the United States of America, and in and to application(s) for patent filed under any and all international conventions and treaties, and in and to any patent issuing therefrom in foreign countries, which describe, illustrate, and claim the above-identified invention(s). I hereby also sell, assign, and transfer unto ABR/NAU, the entire right, title, and interest in and to all rights under any and all international conventions and treaties in respect of the above-identified invention(s). I authorize ABR/NAU to apply for patent in foreign countries directly in its own name, and to claim the priority of the filing date under the provisions of any and all domestic laws and international conventions and treaties.

I hereby authorize and request the Commissioner of Patents and Trademarks of the United States of America to issue Letters Patent upon the aforesaid application, continuation, continuation-in-part, division, reissue, reexamination, extension, renewal, or substitute, to ABR/NAU, for the sole use and behalf of ABR/NAU, its successors, assigns, and legal representatives, to the full end of the term for which the Letters Patent may be granted, the same as they would have been held and enjoyed by me had this assignment not been made. I authorize and request the equivalent authorities in foreign countries to issue the patents of their respective countries to and in the name of ABR/NAU in the same manner.

I agree that, when requested, I will, without charge to ABR/NAU, but at its expense, sign all papers, take all rightful oaths, and do all acts which may be necessary, desirable, or convenient for securing and maintaining patents for the invention(s) in any and all countries and for vesting title thereto in ABR/NAU, its successors, assigns, and legal representatives or nominees.

I covenant with ABR/NAU, its successors, assigns, and legal representatives, that the interest and property hereby conveyed is free from all prior assignment, grant, mortgage, license, or other encumbrance.

  
\_\_\_\_\_  
Signature for PAUL S. KEIM

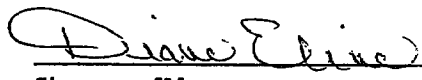
STATE OF ARIZONA )  
COUNTY OF Maricopa )

I, Diane Eline, a Notary Public in and for the County and State aforesaid, do hereby certify that PAUL S. KEIM, whose name is subscribed to the foregoing instrument, appeared before me this day in person and acknowledged that he/she signed, sealed and delivered the instrument as his/her free and voluntary act and deed for the uses and purposes therein set forth.

Given under my hand and notarial seal this 28<sup>th</sup> day of October, 2003.



Notary Public State of Arizona  
Maricopa County  
Diane M Eline  
Expires August 20, 2006

  
\_\_\_\_\_  
Signature of Notary



## ASSIGNMENT AND AGREEMENT

For good and valuable consideration, the receipt of which is hereby acknowledged, I, TALIMA PEARSON of Flagstaff, Arizona, have sold, assigned, and transferred, and do hereby sell, assign, and transfer unto ARIZONA BOARD OF REGENTS, acting for and on behalf of, NORTHERN ARIZONA UNIVERSITY (ABR/NAU), a non-profit organization of the State of Arizona, having its principal office in Tempe, State of Arizona, United States of America, and its successors, assigns, and legal representatives, the entire right, title, and interest in and to certain invention(s), entitled MOLECULAR SIGNATURES AND ASSAY FOR FLUOROQUINOLINE RESISTANCE IN BACILLUS ANTHRACIS, Attorney Docket No. 130588.00026, described, illustrated, and claimed in an application filed under the Patent Cooperation Treaty (PCT), together with the entire right, title and interest in and to any application for Letters Patent filed in the United States of America claiming priority to, claiming the invention described in, or otherwise based on, the PCT application, and in and to any continuation, continuation-in-part, division, reissue, reexamination, extension, renewal, or substitute thereof, and in and to any Letters Patent which may issue upon the application(s).

I hereby sell, assign, and transfer unto ABR/NAU, the entire right, title, and interest in and to application(s) for patent filed in all countries foreign to the United States of America, and in and to application(s) for patent filed under any and all international conventions and treaties, and in and to any patent issuing therefrom in foreign countries, which describe, illustrate, and claim the above-identified invention(s). I hereby also sell, assign, and transfer unto ABR/NAU, the entire right, title, and interest in and to all rights under any and all international conventions and treaties in respect of the above-identified invention(s). I authorize ABR/NAU to apply for patent in foreign countries directly in its own name, and to claim the priority of the filing date under the provisions of any and all domestic laws and international conventions and treaties.

I hereby authorize and request the Commissioner of Patents and Trademarks of the United States of America to issue Letters Patent upon the aforesaid application, continuation, continuation-in-part, division, reissue, reexamination, extension, renewal, or substitute, to ABR/NAU, for the sole use and behalf of ABR/NAU, its successors, assigns, and legal representatives, to the full end of the term for which the Letters Patent may be granted, the same as they would have been held and enjoyed by me had this assignment not been made. I authorize and request the equivalent authorities in foreign countries to issue the patents of their respective countries to and in the name of ABR/NAU in the same manner.

I agree that, when requested, I will, without charge to ABR/NAU, but at its expense, sign all papers, take all rightful oaths, and do all acts which may be necessary, desirable, or convenient for securing and maintaining patents for the invention(s) in any and all countries and for vesting title thereto in ABR/NAU, its successors, assigns, and legal representatives or nominees.

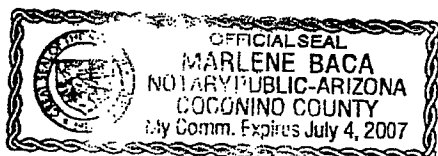
I covenant with ABR/NAU, its successors, assigns, and legal representatives, that the interest and property hereby conveyed is free from all prior assignment, grant, mortgage, license, or other encumbrance.


  
\_\_\_\_\_  
Signature for TALIMA PEARSON

STATE OF ARIZONA )  
COUNTY OF Coconino )

I, Marlene Baca, a Notary Public in and for the County and State aforesaid, do hereby certify that TALIMA PEARSON, whose name is subscribed to the foregoing instrument, appeared before me this day in person and acknowledged that he/she signed, sealed and delivered the instrument as his/her free and voluntary act and deed for the uses and purposes therein set forth.

Given under my hand and notarial seal this 24 day of Oct, 2003.



  
\_\_\_\_\_  
Signature of Notary

## ASSIGNMENT AND AGREEMENT


For good and valuable consideration, the receipt of which is hereby acknowledged, I, LANCE PRICE of Baltimore, Maryland, have sold, assigned, and transferred, and do hereby sell, assign, and transfer unto ARIZONA BOARD OF REGENTS, acting for and on behalf of, NORTHERN ARIZONA UNIVERSITY (ABR/NAU), a non-profit organization of the State of Arizona, having its principal office in Tempe, State of Arizona, United States of America, and its successors, assigns, and legal representatives, the entire right, title, and interest in and to certain invention(s), entitled MOLECULAR SIGNATURES AND ASSAY FOR FLUOROQUINOLINE RESISTANCE IN BACILLUS ANTHRACIS, Attorney Docket No. 130588.00026, described, illustrated, and claimed in an application filed under the Patent Cooperation Treaty (PCT), together with the entire right, title and interest in and to any application for Letters Patent filed in the United States of America claiming priority to, claiming the invention described in, or otherwise based on, the PCT application, and in and to any continuation, continuation-in-part, division, reissue, reexamination, extension, renewal, or substitute thereof, and in and to any Letters Patent which may issue upon the application(s).

I hereby sell, assign, and transfer unto ABR/NAU, the entire right, title, and interest in and to application(s) for patent filed in all countries foreign to the United States of America, and in and to application(s) for patent filed under any and all international conventions and treaties, and in and to any patent issuing therefrom in foreign countries, which describe, illustrate, and claim the above-identified invention(s). I hereby also sell, assign, and transfer unto ABR/NAU, the entire right, title, and interest in and to all rights under any and all international conventions and treaties in respect of the above-identified invention(s). I authorize ABR/NAU to apply for patent in foreign countries directly in its own name, and to claim the priority of the filing date under the provisions of any and all domestic laws and international conventions and treaties.

I hereby authorize and request the Commissioner of Patents and Trademarks of the United States of America to issue Letters Patent upon the aforesaid application, continuation, continuation-in-part, division, reissue, reexamination, extension, renewal, or substitute, to ABR/NAU, for the sole use and behalf of ABR/NAU, its successors, assigns, and legal representatives, to the full end of the term for which the Letters Patent may be granted, the same as they would have been held and enjoyed by me had this assignment not been made. I authorize and request the equivalent authorities in foreign countries to issue the patents of their respective countries to and in the name of ABR/NAU in the same manner.

I agree that, when requested, I will, without charge to ABR/NAU, but at its expense, sign all papers, take all rightful oaths, and do all acts which may be necessary, desirable, or convenient for securing and maintaining patents for the invention(s) in any and all countries and for vesting title thereto in ABR/NAU, its successors, assigns, and legal representatives or nominees.


I covenant with ABR/NAU, its successors, assigns, and legal representatives, that the interest and property hereby conveyed is free from all prior assignment, grant, mortgage, license, or other encumbrance.

  
Signature for LANCE PRICE

STATE OF MARYLAND  
COUNTY OF Baltimore

I, Rhonda Patrice Allen, a Notary Public in and for the County and State aforesaid, do hereby certify that LANCE PRICE, whose name is subscribed to the foregoing instrument, appeared before me this day in person and acknowledged that he/she signed, sealed and delivered the instrument as his/her free and voluntary act and deed for the uses and purposes therein set forth.

Given under my hand and notarial seal this 14th day of November, 2003.

  
Signature of Notary

**RHONDA PATRICE ALLEN, NOTARY PUBLIC**  
**STATE OF MARYLAND**  
**CITY OF BALTIMORE**  
**MY COMMISSION EXPIRES FEBRUARY 19, 2007**

QBPHX\130588.00026\1787852.1

14th **SIGNED BEFORE ME THIS**  
**DAY OF** November 2003

## ASSIGNMENT AND AGREEMENT

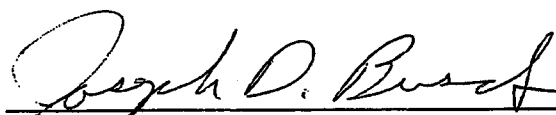
For good and valuable consideration, the receipt of which is hereby acknowledged, I, JOSEPH D. BUSCH of West Lafayette, IN, have sold, assigned, and transferred, and do hereby sell, assign, and transfer unto ARIZONA BOARD OF REGENTS, acting for and on behalf of, NORTHERN ARIZONA UNIVERSITY (ABR/NAU), a non-profit organization of the State of Arizona, having its principal office in Tempe, State of Arizona, United States of America, and its successors, assigns, and legal representatives, the entire right, title, and interest in and to certain invention(s), entitled MOLECULAR SIGNATURES AND ASSAY FOR FLUOROQUINOLINE RESISTANCE IN BACILLUS ANTHRACIS, Attorney Docket No. 112624.00029, described, illustrated, and claimed in an application filed under the Patent Cooperation Treaty (PCT), together with the entire right, title and interest in and to any application for Letters Patent filed in the United States of America claiming priority to, claiming the invention described in, or otherwise based on, the PCT application, and in and to any continuation, continuation-in-part, division, reissue, reexamination, extension, renewal, or substitute thereof, and in and to any Letters Patent which may issue upon the application(s).

I hereby sell, assign, and transfer unto ABR/NAU, the entire right, title, and interest in and to application(s) for patent filed in all countries foreign to the United States of America, and in and to application(s) for patent filed under any and all international conventions and treaties, and in and to any patent issuing therefrom in foreign countries, which describe, illustrate, and claim the above-identified invention(s). I hereby also sell, assign, and transfer unto ABR/NAU, the entire right, title, and interest in and to all rights under any and all international conventions and treaties in respect of the above-identified invention(s). I authorize ABR/NAU to apply for patent in foreign countries directly in its own name, and to claim the priority of the filing date under the provisions of any and all domestic laws and international conventions and treaties.

I hereby authorize and request the Commissioner of Patents and Trademarks of the United States of America to issue Letters Patent upon the aforesaid application, continuation, continuation-in-part, division, reissue, reexamination, extension, renewal, or substitute, to ABR/NAU, for the sole use and behalf of ABR/NAU, its successors, assigns, and legal representatives, to the full end of the term for which the Letters Patent may be granted, the same as they would have been held and enjoyed by me had this assignment not been made. I authorize and request the equivalent authorities in foreign countries to issue the patents of their respective countries to and in the name of ABR/NAU in the same manner.

I agree that, when requested, I will, without charge to ABR/NAU, but at its expense, sign all papers, take all rightful oaths, and do all acts which may be necessary, desirable, or convenient for securing and maintaining patents for the invention(s) in any and all countries and for vesting title thereto in ABR/NAU, its successors, assigns, and legal representatives or nominees.


I covenant with ABR/NAU, its successors, assigns, and legal representatives, that the interest and property hereby conveyed is free from all prior assignment, grant, mortgage, license, or other encumbrance.

  
\_\_\_\_\_  
Signature for JOSEPH D. BUSCH

STATE OF INDIANA )  
COUNTY OF Tippecanoe )

I, Sandra S. Exmeyer, a Notary Public in and for the County and State aforesaid, do hereby certify that JOSEPH D. BUSCH, whose name is subscribed to the foregoing instrument, appeared before me this day in person and acknowledged that he/she signed, sealed and delivered the instrument as his/her free and voluntary act and deed for the uses and purposes therein set forth.

Given under my hand and notarial seal this 11<sup>th</sup> day of October, 2004.

  
\_\_\_\_\_  
Signature of Notary

SONDRA S. EXMEYER  
NOTARY PUBLIC STATE OF INDIANA  
TIPPECANOE COUNTY  
MY COMMISSION EXPIRES 10/17/07

QBPHX\1877168

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Paul S. Keim *et al.*  
Serial No. : To be assigned  
Date of Filing : April 11, 2005  
Title : *MOLECULAR SIGNATURE AND ASSAY FOR FLUOROQUINOLINE  
RESISTANCE IN BACILLUS ANTHRACIS*  
Art Unit : To be assigned  
Examiner : To be assigned

---

VERIFICATION STATEMENT

---

**MS: PCT RO/US**

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313

Dear Sir:

The undersigned, an attorney registered to practice before the U.S. Patent and Trademark Office and representing the applicants in the above-identified patent application does hereby state and affirm that the content of the printed sequence listing and the content of the sequence listing attached hereto in computer readable form are one and the same.

Dated in Phoenix, Arizona, this 11 day of April 2005.

Respectfully submitted,  
**QUARLES & BRADY STREICH LANG, LLP**

April 11, 2005

By: 

Robert D. Atkins  
Reg. No. 34,288

Attorney Docket No. 112624.00029

**Address all correspondence to:**

Robert D. Atkins

Quarles & Brady Streich Lang LLP

One Renaissance Square

Two North Central Avenue

Phoenix, AZ 85004

Telephone: 602-229-5311

Facsimile: 602-229-5690

Email: rda@quarles.com

## SEQUENCE LISTING

<110> Keim, Paul S.

Pearson, Talima

Price, Lance

Busch, Joseph D.

<120> Molecular signatures and assay for fluoroquinoline resistance in  
bacillus anthracis

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<223> BA ParC-E R1

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30

<210> 13

<211> 27

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<223> BA ParE aF1

<400> 13

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27

<210> 14

<211> 29

<212> DNA

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<400> 14

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29

<210> 15

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<223> BA ParE bF1

<400> 15

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20

<210> 16

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<223> BA ParE bR1

<400> 16

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<210> 17

<211> 31

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<222> (1)..(31)

<223> BA ParE cF1

<400> 17

ctaattctgc ttcaatccca tttgttcac c

31

<210> 18

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<222> (1)..(28)

<223> BA ParE cR1

<400> 18

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28

<210> 19

<211> 26

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<223> BA ParE dF1

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26

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<222> (1)..(30)

<223> BA ParE dR1

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<223> BA GyrB aF1

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22

<210> 22

<211> 18

<212> DNA

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18

<210> 23

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<210> 24

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<400> 24

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32

<210> 25

<211> 35

<212> DNA

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<223> Bacillus anthracis

<220>

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<222> (1)..(35)

<223> BA GyrB cF1

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35

<210> 26

<211> 31

<212> DNA

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<223> Bacillus anthracis

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<221> primer\_bind

<222> (1)..(31)

<223> BA GyrB cR1

<400> 26

gctttctcaa tatcaaaatc tccgccaatg t

31

<210> 27

<211> 29

<212> DNA

<213> Artificial

<220>

<223> Bacillus anthracis

<220>

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<222> (1)..(29)

<223> BA GyrB dF1

<400> 27

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29

<210> 28

<211> 39

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<223> BA GyrB-A R1

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20

<210> 31

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<210> 32

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25

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<223> BA GyrA bF1

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ggaagtacgt cgtgatgccca atgctaag

29

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<400> 34

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35

<210> 35

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<222> (1)..(34)

<223> BA GyrA cF1

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34

<210> 36

<211> 36

<212> DNA

<213> Artificial

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<220>

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<222> (1)..(36)

<223> BA GyrA cR1

<400> 36

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36

<210> 37

<211> 22

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<223> BAgyrA01F\_flanking

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22

<210> 38

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<223> Bacillus anthracis

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<222> (1)..(23)

<223> BAgyrA01R\_flanking

<400> 38

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<210> 39

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<222> (1)..(19)

<223> BAparC02F\_flanking

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19

<210> 40

<211> 26

<212> DNA

<213> Artificial

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<223> Bacillus anthracis

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<222> (1)..(26)

<223> BAparC02R\_flanking SBE primers

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26



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<223> BAgyrASNP248F\_internal

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<400> 42

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25

<210> 43

<211> 29

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<222> (1)..(8)

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<400> 43

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29

<210> 44

<211> 33

<212> DNA

<213> Artificial

<220>

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<223> n is a, c, g, or t

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33

<210> 45

<211> 33

<212> DNA

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<222> (1)..(13)

<223> n is a, c, g, or t

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33

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<223> BAgyrASNP254R(T)\_internal

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<400> 46  
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33

<210> 47  
<211> 33  
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<222> (1)..(13)

<223> n is a, c, g, or t

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33

<210> 48

<211> 37

<212> DNA

<213> Artificial

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<223> Bacillus anthracis

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<223> BAgyrASNP265R\_internal

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<222> (1)..(18)

<223> n is a, c, g, or t

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37

<210> 49

<211> 37

<212> DNA

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<220>

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<222> (1)..(37)

<223> BAgyrASNP265R(G)\_internal

<220>

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<222> (1)..(18)

<223> n is a, c, g, or t

<400> 49

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37

<210> 50

<211> 41

<212> DNA

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<222> (1)..(41)

<223> BAgyrASNP266R\_internal

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<222> (1)..(22)

<223> n is a, c, g, or t

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41

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<211> 45

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<223> BAparCSNP242F\_internal

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<222> (1)..(29)

<223> n is a, c, g, or t

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45

<210> 52

<211> 49

<212> DNA

<213> Artificial

<220>

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<222> (1)..(49)  
<223> BApaCSNP253R\_internal

<220>  
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<222> (1)..(28)  
<223> n is a, c, g, or t

<400> 52  
nnnnnnnnnn nnnnnnnnnn nnnnnnnnga cttaaacgta ccatcgctt 49

<210> 53  
<211> 53  
<212> DNA  
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<220>  
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<222> (1)..(53)  
<223> BAparCSNP254R\_internal

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<223> n is a, c, g, or t

<400> 53  
nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnagccatg gtacgttaa gtc 53